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World Class Supply Chain 2021: Vision 2030: SCM in a New Decade

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WORLD CLASS SUPPLY CHAIN 2021: VISION 2030: SCM IN A NEW DECADE

A White Paper based on the Fifth Annual World Class Supply Chain Summit

(May 5th, 2021)

Summit convened remotely (via Zoom) by the Lazaridis School in partnership with the Milton Chamber of Commerce and CN Rail





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TABLE OF CONTENTS

Acknowledgments	2
Executive Summary	3
Introduction and Background – The Summit's Philosophy and Design	4
The Summit's Content and Insights from:	
The Panel Discussion	5
The Academia Keynote Address	6
Building on the Summit's Deliberations: Some Topics for Future Research	7
Conclusions, Plans, and Projections	8
Some References to Guide Potential Future Research Projects	9
APPENDIX	
Exhibit 1: Summit Event Schedule	11
Exhibit 2: The Pre-Summit Survey Instrument	12

Acknowledgments

Thank you to the many people who helped with bringing the summit and this white paper to fruition.

SUMMIT DESIGN/PLANNING TEAM

Wilfrid Laurier University's **Danny Aguizi** (Digital Communications Strategist); **Brynlea Dickson** (Student Co-Chair); **Danielle Havelka** (Associate Director, Development); and **Kate MacDonald** (Officer, Development);

The City of Milton Chamber of Commerce's Scott McCammon (President and CEO)

CN Rail's Jim Gray; Keith Reardon (Co-Chair); and Elizabeth Young.

SPEAKERS

Captain Allan Gray (Panelist), CEO of the Port of Halifax

Brian Harold (Panelist), Managing Director at APM Terminals in Mobile, Alabama

Eric Waltz (Panelist), President Global Container Terminals (GCT) Canada in Vancouver

Brian Friesen (Panelist), Vice-President, Trade Development & Communications, Prince Rupert Port Authority

Dr. Glenn Richey (gave the Academia Keynote Presentation)

Harbert Eminent Scholar and Chair, Department of Supply Chain Management, in the Harbert College of Business at Auburn University.

STUDENTS WHO JOINTLY HOSTED NETWORKING BREAKOUT ROOMS (All Laurier students)

Shatheeshan Anantharajan Shaili Kadakia Samantha Kkan Atsaren Kulothparan Keivan Moeini Matthew Mychajluk Constantin Sasarman

EVENT MODERATOR

Scott McCammon (President and CEO of the Milton Chamber of Commerce)

SUMMIT DELEGATES

Much of the credit for the summit's success is due to the nearly 150 delegates' enthusiasm, high energy, and purposeful approach to the deliberations.

AUDIOVISUAL AND PHOTOGRAPHY PERSONNEL

The quality of the event day product and items such as the video shoots for the summit co-chairs' invitation messages is due to the meticulous work of Laurier's **Danny Aguizi** and Granger Digital's **Stephen Granger**.

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Executive Summary

The *Fifth Annual World Class Supply Chain Summit* on May 5th, 2021 was momentous in at least threes ways: First, it marked a return to having the annual summit following the cancellation of the 2021 summit because of the COVID-19 pandemic. Second, in light of ongoing pandemic-related restrictions on in-person gathering, the 2021 summit was convened virtually –this meant leveraging needed digital technology platform and technological savvy of the summit planning team personnel. Third, in light of how the pandemic has affected supply chains, the summit theme (*Vision 2030 -SCM in a New Decade*) and, the industry representation of the speakers, and the content aligned with the kind of thinking needed for supply chains to survive the pandemic and thrive in the years ahead.

In particular, because container ports are reliable barometers of economic activity such as how well an economy is recovering from the pandemic, the summit's panel discussion was expressly designed to shed light on insights from panelists who are executives at key North American ports: Halifax; Mobile (Alabama); Vancouver; and Prince Rupert. The panel discussion focused on eight questions that ranged from the initial pandemic impacts on container ports through to actions and ideas to handle both immediate and imminent challenges. Three of the most prominent issues in the panel discussion were (i) *technology*, (ii) *collaboration/partnerships*, and (ii) *human capital*. A noteworthy synopsis of some of these issues is the following quote from panelist Brian Friesen (the Prince Rupert Port Authority's Vice-President of Trade Development & Communications, Prince Rupert Port Authority):

"It's a people business; organizations don't do business with one another, people who work at those organizations do business with one another".

To help transition the summit's deliberations from reflection on the pandemic's supply chain effects and towards development of ideas for facilitating recovery, the chosen keynote topic was **the road ahead**. In the keynote address by Professor Glenn Richey (the Harbert Eminent Scholar and Chair in Auburn University's Department of Supply Chain Management) explained several trends. For practitioners, those included building **redundancy in supply chains** (i.e., based on companies critically examining the efficacy of extremely *lean* supply chains for their unique circumstances), some shift to **regional sourcing**, **chains**, pandemic-induced renewal of emphasis on **ecological sustainability**, **global supply chain complexity**, and **technologies** that, currently, are not widely adopted. In looking at these trends from the perspective of supply chain scholars, Professor Richey discussed them as some of the areas in which research is needed in order to answer critical questions such as how to responsibly and sensitively approach cultural barriers to artificial Intelligence/machine learning. This rest of this white paper provides further elaboration on these points as well as the aforementioned points from the panel discussion.

Introduction and Background: The Summit Philosophy and Design

Unlike previous *World Class Supply Chain Summits* (convened on May 11th, 2016; May 10th, 2017; May 9th, 2018; May 8th, 2019), the *Fifth Annual Summit* was convened in a virtual format using the Zoom technology platform. Despite being virtual, this latest summit followed a core philosophy: the *Summit* must continue to be a vital forum for industry and academia to share insights on the challenges and opportunities for current and future supply chain and logistics leaders. Sticking to that philosophy meant retaining three crucial design principles for this invitation-only summit:

- 1. Extend and deepen attendees' knowledge beyond what they <u>already</u> know. This principle starts with the premise that because SCM is an area of specialization for most summit attendees, the summit would be just one of their information sources for ongoing knowledge growth. That is, they are aware of and can access non-summit sources such as industry reports, periodicals, online news, blogs, podcasts, etc. To be of useful to SCM professionals, such information must satisfy at least three criteria: be *clear*, *valuable*, and *actionable*. Therefore, detecting and addressing where non-summit information has shortcomings with respect to those three criteria must necessarily be the summit's approach to *extending* the attendees' SCM knowledge. To that end, we conducted a pre-summit survey to ascertain the invited attendees' views on those shortcomings for 12 topics of significance to SCM in the coming decade (see Exhibit 1 for the survey instrument listing the 12 topics). The key insight from the findings is that, while there is opportunity for the summit to extend knowledge on all 12 topics, three top priority ones for distinctive knowledge extension are: *handling the modern customers' unique and specialized requirements; facing non-traditional (disruptive) competitors; and building flexible logistics capacity. This insight enabled appropriate and more direct tuning of summit content to the attendees' knowledge interests.*
- 2. Facilitate unstructured interaction outside of the formal summit discussions. For the virtual format of the 2021 summit, networking involved using a minimum of seven (7) Zoom breakout rooms for unstructured but meaningful conversations among attendees and speakers. The basic arrangement was as follows: one room each for the four panelists; one for the keynote speaker, one for the academia summit co-chair; and one jointly for the industry and student co-chairs. Each room also had one student jointly hosting the room with each individual mentioned above. Attendees could then move between rooms as they wished. Beyond these seven pre-defined rooms, breakout rooms were dynamically added as conditions dictated. Although this arrangement could not fully replicate in-person networking (e.g., being able to truly feel the energy from the din of multiple spontaneous conversations in a physical space), it was very well suited to the dictates of the pandemic era; i.e., facilitate networking and remain fully compliant with public health guidelines.
- 3. *Facilitate meaningful student involvement.* An aim of every summit is to support professional development of today's students in order to enhance their prospects of being tomorrow's supply chain leaders. Achieving that aim for the 2021 summit involved the following key student appointments:
 - (a) Ms. Brynlea Dickson as the summit's student co-chair to work with the summit planning team and carry out event-day roles such as delivering opening and closing remarks and co-moderating Q&A sessions
 - (b) Ms. Samantha Khan to write the student perspective article for the *Milton Canadian Champion* newspaper (article published in the May 20th)
 - (c) Several students as joint breakout room hosts for the summit's networking activities.

Summit's Summarized Content and Insights

The Panel Discussion

Industry Co-Chair, **Keith Reardon**, moderated a panel discussion to get insights from four panelists: **Captain Allan Gray**, CEO of the Port of Halifax; **Brian Harold**, Managing Director at APM Terminals in Mobile, Alabama; **Eric Waltz**, President of Global Container Terminals (GCT) Canada in Vancouver; and **Brian Friesen**, Vice-President of Trade Development & Communications, Prince Rupert Port Authority. The discussions centred around eight (8) issues (including those raised by the audience). Table 1 lists the issues along with two or three bullet points that highlight the core messages in the panelists' responses.

ISSUEFROMAPORT PERSPECTIVE	RESPONSEHGHUGHTS
1. Challenging panderric impacts	 Interrupted a long and robust growth trajectory Exacerbated logistical challenges of imbalanced import/export container flows Incurred significant increases in the costs of cleaning to reduce virus spread
2 Major improvement initiatives	 Expand port infrastructure to accommodate the ultra-class ship sizes Reconfigure/expand port infrastructure for improved rail connectivity Greater collaboration with city governments to minimize suboptimal actions
3. Actionsto attract port clients such assteamship lines and shippers	 Adopt the logistics park concept Automate to increase container handling efficiency
4. Partnership building strategies	 Maintain contact/communication as you would in a valued personal relationship Work to identify shared causes/interests
5. Sources of pride, particularly since the pandemic	 Staff's competent deployment of the enterprise risk management plan Coordination with established external partners to sustain operations Responsiveness (e.g., rapidly facilitate work-from-home through bulk purchase of laptops during the very short window of supply availability)
6. Actionsto attract newtalent	 Strong ties to the port city's educational institutions that have SOM/logistics programs Collaborate with the city, terminal operators, etc. on coordinated recruitment initiatives Overcome myopic perception of ports by exposing students to the full range of jobs/careers
7. Disruptive technologies	 Systems to location, track, and secure on-site assets Decision support systems to extend visibility into non-traditional metrics (e.g., carbon footprint)
8. Importance of forecasting	 Knowing shipment details (arrival time, cargo destination, etc.) vital for efficient operations Operational flexibility vital as details cannot always be forecasted/known with 100% accuracy

In addition to responding to questions on the issues in Table 1, panelists also gave closing remarks on *where we are and how to move forward*. In those remarks as well as in their earlier responses, there was significant emphasis on *technology, collaboration/partnerships*, and *human capital*. The following quotes from their closing remarks convey the essence of what the panelists emphasized:

On technology: "*We've got to move faster in the digitalization/innovation space*" On collaboration: "*Moving forward, there has to be a lot more collaboration between ports*" On human capital: "*These (infrastructure) projects require good, smart people coming out of school*"

The Academia Keynote Address

Professor Glenn Richey (Harbert Eminent Scholar and Chair in SCM at Auburn University's Harbert College of Business) delivered the keynote address titled *The Road Ahead*. To account for the pre-summit survey results, Professor Richey aligned his talk with the 12 SCM topics covered in the survey. His material on those topics in the formal address and the subsequent Q&A can be described as spanning three categories: (i) real-world examples to illustrate his points; (ii) scholarly research findings; and (iii) prominent trends to take shape over the next several years.

Real-world examples. Two notable examples were the ones used to illustrate the effects of (a) COVID-19 on sourcing strategies and (b) unsatisfactory supply chain transparency on a firm's *intangible liability*. As regards sourcing, the example was the automobile sector's current retreat f rom a long-standing practice of just-in-time manufacturing: a practice associated with *lean inventories* (which, in extreme form, means zero inventory). This retreat stems from the detrimental operational setbacks of inventory shortages caused by COVID-19 disruption of supply sources. That is, automobile manufacturers are now storing several months of inventory as a buffer against possible future supply disruptions. The example on intangible liability was the 2013 horsemeat scandal: for the complex beef supply chain used by retailers such as Tesco Foods (see Figure 1), the actual level of transparency was not enough for them to see that the supplies they wanted (pure beef) actually contained horsemeat. The estimated £300 million drop in Tesco's market value illustrates the liability of transparency gaps.



Figure 1: The interconnected and complex beef supply chain

Findings from scholarly research. Professor Richey presented findings from recent research to provide supporting evidence for several of his remarks. For example, he referenced the Morgan *et al.* (2018) study findings to make the point that *reverse logistics* must be included in a firm's ecological sustainability strategy. To paraphrase from his discussion of that study: *unless these things (sustainability and reverse logistics) come together, companies will not see a positive performance impact.*

Trends taking shape. The following three trends capture the essence of those that Professor Richey cited as poised to continue (a) reshaping SCM over the next several years and (b) influencing key activities such as identifying the right talent and supply chain partners:

- 1. Greater use of sourcing that is regional in scope and uses lean supply chain concepts more sparingly
- 2. Dynamic post-pandemic effects on complexity due to heterogeneity (e.g., cultural) in global supply chains
- 3. Firms being even more <u>obligated</u> to account for sustainability and technologies (whether proven or embryonic)

Building on the Summit's Deliberations: Some Topics for Future Research

Several points that arose in day's discussion provided important insights. From the panel discussion, these include the role of the Halifax Port Authority's Living Lab¹ (**PIER = P**ort Innovation Engagement, and **R**esearch) for stakeholder engagement/collaboration, research, etc. From the keynote, these include the insight that the pandemic-induced retreat from ultra-lean supply chains is not purely talk but a reality for some firms. Along with these insights, issues requiring deeper exploration and research also arose. A helpful portrayal of those inadequately explored issues is what Professor Richey, from his vantage point as an Associate Editor of the *Journal of Business Logistics*, presented as a list of hot topics for future research. These are:

- 1. Artificial Intelligence/machine learning
- 2. Autonomous vehicles
- 3. Distribution/fulfillment centre automation
- 4. Circular economy
- 5. Consumers' role in SCM
- 6. Digital supply chains
- 7. E-Commerce logistics
- 8. Global logistics

- 9. Healthcare logistics
- 10. Human (Supply Chain Talent) Resources
- 11. Last mile delivery
- 12. Network design
- 13. Retail SCM/Logistics
- 14. Reverse logistics
- 15. Supply chain finance
- 16. Supply chain responsiveness and resilience
- 17. Supply chain sustainability

These areas are relevant, not only to the broad SCM domain, but also to the specific SCM sub-domain covered at the summit: container ports. Of course, that sub-domain has unique (and often ignored) issues such as the management of gate operations – a point raised during the panel discussion. To acknowledge that uniqueness, the bibliography list includes several recent papers and reports (both scholarly peer-reviewed material and material targeted more directly at industry practitioners). With those references and the topic list above, summit attendees and readers of this report might see opportunities to hone in on more specific research question and topics that align with their interests.

¹https://www.portofhalifax.ca/founding-partners-announced-for-the-pier-at-the-seaport-living-lab/

Conclusions, Plans, and Projections

For the very first time in its 6-year history, the annual *World Class Supply Chain Summit* was convened virtually. Although this was not our preferred format, we are pleased to have received very positive from the delegates on key criteria such as the content, the schedule, the level of student engagement, and the level of idea exchange. We also gained valuable experience-based insights on how to gain optimal benefits from teleconferencing technologies. This experience will serve us well as we consider ways to have an in-person summit on Wednesday May 4th, 2022 in Milton, Ontario, while simultaneously delivering real value to geographically dispersed delegates who cannot be in Milton that day. This hybrid (in-person/remote) summit model seems to be what we must continue to design and refine, for 2022 and in subsequent years.

Along with those insights on hybrid meeting design, the *Fifth Annual World Class Supply Chain Summit* also produced key insights on the subject matter of supply chain management. Through a panel discussion and academia keynote address aligned to the theme of *Vision 2030 - Supply Chain Management in a New Decade*, the summit delved into topics that matter in a world that is progressively emerging from the COVID-19 pandemic. The discussions addressed the emerging business challenges and opportunities, including opportunities for scholars to conduct rigorous study of issues that the SCM community is genuinely interested in. An unmistakeable signal of that genuine interest is that in the post-summit survey question asking attendees to suggest themes and keywords for the 2022 summit, the most frequently occurring word in their suggestions was *sustainability* – which is one of the topics identified as high priority for scholarly research.

As such, the three partnering organizations that plan and run the summit (Wilfrid Laurier University's Lazaridis School of Business & Economics; CN Rail; and the City of Milton Chamber of Commerce) have begun the planning work on three key items. These are:

- (i) wording the exact theme around notions of ecological sustainability in supply chains
- (ii) identifying potential speakers whose credentials in the sustainability come from their work in areas such as
 (a) spearheading use of eco-friendly fleets or principles of LEED (Leadership in Energy and Environmental Design) in their logistical operations; (b) seriously accounting for emissions considerations in their mode and carrier choice decisions; and (c) ongoing engagement in rigorous research on sustainability.
- (iii) Identifying students whose research and/or entrepreneurial ventures in the environmental space deserve to be showcased at the 2022 summit

SOME REFERENCES TO GUIDE POTENTIAL FUTURE RESEARCH PROJECTS

Scholarly Peer-Reviewed Articles

- 1. Fruth, M., & Teuteberg, F. (2017). Digitization in maritime logistics—What is there and what is missing?. *Cogent Business & Management, 4*(1), 1411066. doi: 10.1080/23311975.2017.1411066
- Heilig, L., Lalla-Ruiz, E., & Voß, S. (2017). Digital transformation in maritime ports: Analysis and a game theoretic framework. *Netnomics: Economic Research and Electronic Networking*, 18(2-3), 227-254. doi: <u>http://dx.doi.org.libproxy.wlu.ca/10.1007/s11066-017-9122-x</u>
- 3. Morgan, T. R., Tokman, M., Richey, G., Defee, C. (2018). Resource commitment and sustainability: a reverse logistics performance process model. *International Journal of Physical Distribution & Logistics Management*, *48*(2), 164-182.
- 4. Munim, Z. H., Dushenko, M., Jimenez, V. J., Shakil, M. H., & Imset, M. (2020). Big data and artificial intelligence in the maritime industry: a bibliometric review and future research directions. *Maritime Policy & Management*, *47*(5), 577-597.
- Muñuzuri, J., Onieva, L., Cortés, P., & Guadix, J. (2020). Using IoT data and applications to improve port-based intermodal supply chains. *Computers & Industrial Engineering*, 139, 105668. <u>https://doi.org/10.1016/j.cie.2019.01.042</u>
- Parola, F., Satta, G., Buratti, N., & Vitellaro, F. (2020). Digital technologies and business opportunities for logistics centres in maritime supply chains. *Maritime Policy & Management*, 1-17. <u>https://doi-org.libproxy.wlu.ca/10.1080/03088839.2020.1788731</u>
- 7. Sarabia-Jácome, D., Palau, C. E., Esteve, M., & Boronat, F. (2019). Seaport Data Space for Improving Logistic Maritime Operations. *IEEE Access*, *8*, 4372-4382.

Practitioner Articles

- 1. Becha, H. (2020). "Standardized Container IoT is Key for "Smart" Supply Chains", *The Maritime Executive*. Retrieved from <u>https://www.maritime-executive.com/editorials/standardized-iot-for-containers-is-the-key-for-smart-supply-chains-1</u>. Accessed on September 14, 2020
- Burke, D. (2020). "Amid COVID-19, cargo container shortage sparked fears of product shortages in Canada", *CBC News*. Retrieved from <u>https://www.cbc.ca/news/canada/nova-scotia/cargo-containers-covid-19-shipping-supply-chain-1.5556055</u>. Accessed on September 14, 2020
- Cerdeiro, D., Komaromi, A., Liu, Y., and Saeed, M. (2020). "Tracking Trade During the COVID-19 Pandemic", *IMFBlog*. Retrieved from <u>https://blogs.imf.org/2020/05/14/tracking-trade-during-the-covid-19-pandemic/</u>. Accessed on September 16, 2020
- 4. Hudicka, J. (2020). "Self-Service Portals Will Make Port Terminals More Resilient", *The Maritime Executive*. Retrieved from <u>https://www.maritime-executive.com/editorials/self-service-portals-will-make-port-terminals-more-resilient-1</u>. Accessed on September 14, 2020
- 5. Johansson, H. (2020). "Rewriting Shipping & Logistics With Technology to Boost Utilization", *The Maritime Executive*. Retrieved from <u>https://www.maritime-executive.com/editorials/rewriting-shipping-logistics-with-technology-to-boost-utilization</u>. Accessed on September 14, 2020
- Lind, M. (2020). "Do maritime authorities have a role in digitalisation of shipping? the "Digital (port) Approach" in a sea transport context", *Digital Ship*. Retrieved from <u>https://thedigitalship.com/news/item/6676-do-maritime-authorities-have-a-role-in-digitalisation-of-shipping-the-digital-port-approach-in-a-sea-transport-context</u>. Accessed on September 14, 2020

- Robert, L. (2020). "Automation and Offshoring are Changing the Logistics Industry", *The Maritime Executive*. Retrieved from <u>https://www.maritime-executive.com/editorials/automation-and-offshoring-are-changing-the-logistics-industry</u>. Accessed on September 14, 2020
- Teoh, P. (2020). "The Impact of the Covid-19 Pandemic on Shipping", *The Maritime Executive*. Retrieved from https://www.maritime-executive.com/editorials/the-impact-of-the-covid-19-pandemic-on-shipping. Accessed on September 14, 2020
- 9. Valentine, H. (2020). "Automation Could Aid Port Operations During Pandemic", *The Maritime Executive*. Retrieved from <u>https://www.maritime-executive.com/editorials/automation-could-aid-port-operations-during-pandemic</u>. Accessed on September 14, 2020

EXHIBIT 1: The World Class Supply Chain 2021 Event Schedule

	WORLD CLASS SUPPLY CHAIN 2021 Vision 2030: SCM for a new decade Wednesday, May 5, 2021
8:30 am	Welcome Event moderator, Scott McCammon, President and CEO of the Milton Chamber of Commerce, welcomes attendees.
8:35 am	Opening remarks By Dr. Michael Haughton, Professor, Supply Chain Management at the Lazaridis School of Business and Economics at Wilfrid Laurier University, Keith Reardon, Senior Vice-President, Consumer Product Supply Chain, CN, and Student Co-Chair Brynlea Dickson, Immediate Past Co- President, Laurier Supply Chain Association.
8:45 am	How COVID-19 has changed SCM How COVID-19 has transformed the way goods and services are delivered. CN's Keith Reardon is joined by representatives from the Ports of Halifax, Prince Rupert, Mobile, and Vancouver to discuss the pandemic-related challenges they've faced and overcome, and share the lessons that can benefit SCM practitioners.
9:35 am	The road ahead Glenn Richey, Harbert Eminent Scholar and Chair, Department of Supply Chain Management, Auburn University, reveals the opportunities – and risks – that will be faced by SCM professionals in a post-COVID world.
10:25 am 10:40 am	Q and A Closing Remarks By Co-Chairs Dr. Michael Haughton, Keith Reardon, and Brynlea Dickson.
11:00 am	Adjournment Until World Class Supply Chain 2022, on Wednesday, May 4, 2022, in Milton.
11:00 am	Networking Session Students and attendees are welcome to engage with Summit speakers and panelists.

Exhibit 2: PRE-SUMMIT SURVEY

Dear summit attendee,

By responding to this survey, which should take you less than 12 minutes, you will help to enhance the quality of the 2021 summit's discussion on the theme of *Vision 2030 – Supply Chain Management for a New Decade*.

SURVEY ETHICS COMPLIANCE POLICY NOTICE

This survey has been approved by Wilfrid Laurier University's Office of Research Services under file **# 2019-59** as per University Policy 8.2. Your participation is voluntary. The information you provide is kept strictly confidential and none of the answers will be attributed to you personally. Data will be kept confidential for a period of 8 months, and once the final version of the summit White Paper is written, the data will be securely destroyed. If you have questions, or if you require this survey in an alternate format due to a disability, please contact Michael Haughton, Lazaridis School of Business & Economics (mhaughton@wlu.ca; phone 519-884-0710, ext. 6205).

YOUR BACKGROUND

1. Which of the following roles do you play in your organization? (check all that apply)

Executive - Executive	- Executive –	Executive - Other	Executive -	Professor	Student	OTHER
Retail Manufactu	Iring Transportation Services	SCM Services	Other sectors			

KNOWLEDGE OF POTENTIAL VALUE TO YOU

2. With reference to following 12 topics that are crucial in the coming decade, what is your assessment of the value and quality of insights you are able to take from sources such as the print media, podcasts, workshops, webinars, etc.? Please answer by checking one of the five boxes that best completes the following phrase for you: "WHAT YOU HAVE READ OR HEARD FROM THESE SOURCES IS"

NOTE: If you are not up to date on any current discussions about a topic, please leave the boxes unchecked.

	Extremely valuable, clear,	Very valuable, clear, and	Moderately valuable	Low in value and	Not at all
SUPPLY CHAIN TOPIC	and actionable	actionable		quality	useful
 Technology-enabled SCM (Artificial Intelligence, Internet of Things, etc.) 					
(2) 21st century SCM skill/talent/labour requirements					
(3) Supply chain risk management					
(4) Role of social media in SCM					
(5) Changing nature of supply chain and distribution networks (on-demand resources; resource sharing, etc.)					
(6) Customer "individualization" (uniqueness)					
(7) Environmental/ecological sustainability					
(8) Effective use of supply chain analytics					
(9) Supply side visibility and supplier relationship management					
(10) Building flexibility/responsiveness in logistics capacity					
(11)Complexity in global and domestic supply chain networks					
(12) Non-traditional/unfamiliar competitors and industry disruptors					